

Amendments to the Claims

Claim 1 (**Currently Amended**) A substrate polishing apparatus comprising:

a polishing table having a polishing surface;

a substrate holder for holding and pressing a substrate against said polishing surface of said polishing table; ~~and~~

a film thickness measuring device for measuring a thickness of a film on the substrate;

and

a controller for controlling a polishing process for the substrate according to a predetermined polishing recipe,

wherein said substrate holder has a plurality of pressure adjustable chambers, and pressures in said respective chambers are adjusted based on the film thickness measured by said film thickness measuring ~~device~~ device, and

wherein said controller is configured to switch between the polishing recipe and another polishing recipe based on the film thickness measured.

Claim 2 (**Original**) A substrate polishing apparatus according to claim 1, wherein said film thickness measuring device measures film thicknesses of a plurality of zones of the substrate corresponding to said respective chambers, and the pressures in said respective chambers are adjusted based on the film thicknesses of the respective zones measured by said film thickness measuring device.

Claim 3 (**Original**) A substrate polishing apparatus according to claim 2, further comprising:

a storage device for storing polishing conditions each for the respective zones of the substrate;

a calculating device for calculating polishing rates at the respective zones of the substrate based on the film thicknesses of the respective zones measured by said film thickness measuring device; and

a correcting device for correcting the polishing conditions including the pressures in said chambers based on the calculated polishing rates.

Claim 4 (**Original**) A substrate polishing apparatus according to claim 1, wherein said film thickness measuring device measures the thickness of the film on the substrate after the substrate is polished.

Claim 5 (**Currently Amended**) A substrate polishing apparatus according to claim 1, wherein said film thickness measuring device measures the ~~film~~ thickness of the film on the substrate while the substrate is being polished.

Claim 6 (**Currently Amended**) A substrate polishing apparatus according to claim 1, wherein:
~~the substrate is moved to pass across a detection sensor of said film thickness measuring device~~ has a detection sensor that is moved across the substrate so that as to obtain time-series data are obtained by said detection sensor of the thickness of the film on the substrate; and
said film thickness measuring device assigns the time-series data to ~~the~~ a plurality of zones of the substrate so as to obtain ~~the~~ film thicknesses of the respective zones.

Claim 7 (**Original**) A substrate polishing apparatus according to claim 1, wherein said film thickness measuring device comprises an eddy current sensor, an optical sensor, a temperature sensor, a torque current sensor, or a microwave sensor.

Claim 8 (**Currently Amended**) A method of polishing a substrate ~~by pressing the substrate against a polishing surface of a polishing table according to a predetermined polishing recipe, the substrate having a film thereon,~~ said method comprising:

holding the substrate by a substrate holder which has a plurality of pressure adjustable chambers;

pressing the substrate against a polishing surface of a polishing table;

providing relative movement between the substrate and the polishing surface;

measuring film thicknesses of a plurality of zones of the substrate ~~corresponding to said respective chambers~~ by a film thickness measuring ~~device~~ device, the zones corresponding to the respective chambers; and

adjusting pressures in ~~said the~~ respective chambers based on the measured film thicknesses of the respective ~~zones~~ zones; and

switching the polishing recipe to another polishing recipe based on the film thickness measured.

Claim 9 (**Currently Amended**) A method according to claim 8, wherein:

the said film thickness measuring device comprises at least one of an eddy current sensor, an optical sensor, a temperature sensor, a torque current sensor, and a microwave sensor; and

the film thicknesses of the respective zones are derived from a signal or a combination of signals from the at least one of the eddy current sensor, the optical sensor, the temperature sensor, the torque current sensor, and the microwave sensor ~~said sensors~~ suitable for the type of film on the substrate.

Claim 10 (**Canceled**)

Claim 11 (**Currently Amended**) A method according to claim 8, wherein said switching comprises switching an operation mode of ~~said~~ the film thickness measuring device ~~is switched~~ to another based on the film thicknesses measured by ~~said~~ the film thickness measuring device.

Claim 12 (**Currently Amended**) A method according to claim 8, further comprising detecting ~~wherein~~ a timing to stop polishing the substrate ~~is detected~~ based on the film thicknesses measured by ~~said~~ the film thickness measuring device.

Claim 13 (**Currently Amended**) A method according to claim 8, wherein:

the an eddy current sensor is used as said film thickness measuring device is an eddy current sensor ~~for measuring the film thicknesses of the respective zones of the substrate;~~

the eddy current sensor has a sensor coil that is moved across the substrate so as to obtain time-series data of a thickness of the film on the ~~substrate is moved to pass across a detection sensor of said film thickness measuring device so that time-series data are obtained by said detection sensor;~~ and

the time-series data are assigned to the zones of the substrate so as to obtain the film thicknesses of the respective zones.

Claim 14 (**Currently Amended**) A method according to claim 8, wherein said measuring comprises repeatedly measuring the film thicknesses of the respective zones of the ~~substrate~~ substrate, are measured repeatedly and said adjusting comprises repeatedly adjusting the pressures in ~~said the~~ chambers ~~are adjusted repeatedly~~ so that the film thicknesses of the respective zones converge within a predetermined range.

Claims 15-18 (**Canceled**)